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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,031	08/18/2003	Raymond Robert Patch	MSFT-1956/303857.1	3222
41505	7590	09/08/2006	EXAMINER	
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)			VAUGHN, GREGORY J	
ONE LIBERTY PLACE - 46TH FLOOR			ART UNIT	
PHILADELPHIA, PA 19103			PAPER NUMBER	
			2178	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,031

Applicant(s)

PATCH ET AL.

Examiner

Gregory J. Vaughn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Action Background

1. This action is responsive to the amendment filed on 6/12/2006.
2. Applicant has amended claims 1, 7, 10, 13, 18, 21 and 24.
3. Claims 1-25 are pending in the case, claims 1, 10, 18 and 21 are independent claims.
4. Applicant has amended the specification in response to the objections cited by the examiner in the *Drawings* and *Specification* sections of the previous office action (dated 3/10/2006). Applicant's amendment has addressed the objections previously made, and therefore, in view of the amendment, objections to the drawings and specification are withdrawn.
5. Examiner's rejection of claims 7, 13 and 24, made under 35 USC 102, as being anticipated by Tittel et al., as recited in the previous office action (dated 3/10/2006) are withdrawn as necessitated by the amended claims. However new grounds of rejection are presented below.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

7. The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

"Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101."

8. Claims 1-9 and 18-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

9. **Regarding claim 1-9 and 18-20**, the claims define a computer readable medium with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, the specification defines a computer readable medium as also encompassing a signal (see page 6, paragraph 23,

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of the originally filed specification). Therefore the claim does not limit itself to statutory embodiments, because a signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, a "signal" is a form of energy, in the absence of any physical structure or tangible material.

10. Claims 1-25 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. **Regarding claims 1-25**, the claimed invention fails to produce a useful, concrete or tangible result. The claimed invention as a whole must accomplish a practical application. That is, it must produce a "*useful, concrete and tangible result*." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. (See MPEP 2106.) Usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459.

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Applicant's invention is directed toward validating the elements of an electronic message by identifying message elements, and validating the elements using validation rules stored in a validation table. Applicant's claims and disclosure describe the steps taken to manipulate (validate) the nonfunctional descriptive material (i.e. the message), but fail to describe a significant functionality for a validated message. Applicant states in the originally filed disclosure that: "*it is possible to write computer data that is not valid according to some set of rules*" (page 1, paragraph 2), however the disclosure is silent as to how a valid message would be functionally put to use, or what to do if an invalid message is identified.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."

13. Claims 1, 10, 13, 18, 21 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

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claimed invention. Applicant has indicated on page 13 in the reply filed 6/12/2006, that support for the amendments could be found at paragraphs 34, 40 and 45 of the originally filed disclosure. However, the examiner has reviewed the indicated sections and has failed to find support for the amendments.

14. **Regarding claims 1, 10, 18 and 21**, the amendment filed 6/12/2006 adds the following limitation: *"at least one condition whose truth is not assessable solely from the message's syntax"* The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

15. **Regarding claim 13**, the amendment filed 6/12/2006 adds the following limitation: *"a subtree of said first one of the elements are not to be traversed"* and *"applying the validation delegate ... without said validation engine traversing elements in the subtree"*. The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

16. **Regarding claim 24**, the amendment filed 6/12/2006 adds the following limitation: *"the validation engine applies the delegate identified by the first validation table ... without said validation engine traversing said subtree"*. The examiner has reviewed the originally filed specification, and has failed to find

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support for the added limitations. Applicant is required to cancel the new matter in response to this office action.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

"A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States."

18. Claims 1-6, 8-12, 14-23 and 25 remain rejected under 35 U.S.C. 102(b) as being anticipated by Tittel et al., *XML for Dummies*, 2nd Edition, Copyright 2000 (hereinafter Tittel).

19. **Regarding independent claim 1**, Tittel discloses validating a message. Tittel recites: "*An XML document type definition (DTD) defines the rules of the game for XML documents*" (page 61, first paragraph) and "*Using a DTD properly means that your document will be valid*" (page 61, second paragraph). Tittel discloses interpreting document elements in a tree structure and encountering elements of the message in order. Tittel recites: "*You should be able to look at a DTD, list all elements and their attributes, and understand how and when to use those elements and their attributes. Create a document tree to help you understand the hierarchy among document*

elements. A document tree begins with one root element. All other elements are children of (or nest within) that root element" (page 63, first and second paragraphs).

Tittel discloses consulting the DTD to identify a first delegate (or rule) and applying the delegate to the first element on pages 64 and 66. On page 64, at the top of the page, Tittel presents sample XML code that includes a call to an external DTD. The DTD is shown in the sample code on page 66. In the sample code on page 66, a first element is given delegate (shown as the line of code "*<!ELEMENT Book (Subject, Title, Author)>*"). This sample code further shows a second element getting a second delegate (see the subsequent lines of code). The DTD described by Tittel in this section of the book are a listing of syntax rules and not a table per se, however Tittel discloses the DTD in the form of a table. Tittel recites: "*DocBooks uses tables from a different DTD: the so-called CAALS table model, which supports almost any table permutations that you can imagine*" (page 299, fifth paragraph).

Tittel discloses data drawn from a database in Figure 1.1 on page 14. It is well known for databases to have lookup or reference tables for validating data relationships between data sets to establish truth or context validity. A database lookup table validates the relationship between the book author and book title (from the example in the preceding paragraph) so that only true author title data relationships are validated.

20. **Regarding dependent claim 2**, Tittel discloses a first and second validation table. Tittel recites: *"In this section we outline the differences between an internal and an external DTD"* (page 76, first paragraph). Tittel discloses determining that a second validation table contains no delegate for the first element before consulting the first validation table. Tittel recites: *"The XML processor always reads the internal subset first. Therefore, the internal DTD takes precedence"* (page 77, third paragraph). Therefore, Tittel shows that if the second validation table (i.e. the internal DTD) contains no delegate for the element, than the first validation table (the external DTD) would be consulted for a delegate.

21. **Regarding dependent claim 3**, Tittel discloses consulting the first validation table to identify a third delegate for the first element and applying the third delegate. In the sample code on page 66, a first element is given delegate (shown as the line of code `<!ELEMENT Book (Subject, Title, Author)>`). This sample code further shows a second element getting a second delegate (see the subsequent lines of code). The first element "Book" is a parent to the "Subject, Title and Author" elements. The delegates for the child elements inherently affect the parent, thereby applying a third delegate to the first element.

22. **Regarding dependent claim 4**, Tittel discloses a flag indicating that a subtree of the element is to be traversed. In the sample code on page 66, Tittel presents a line of code: `<!ELEMENT Book (Subject, Title, Author)>`.

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The “*Subject*”, “*Title*” and “*Author*” elements are flags that indicate that the element “*Book*” has a subtree that is to be traversed.

23. **Regarding dependent claim 5**, Tittel discloses a plurality of validation tables. Tittel recites: “*In this section we outline the differences between an internal and an external DTD*” (page 76, first paragraph). Tittel discloses selecting one of the validation tables based on a criterion. Tittel recites: “*The XML processor always reads the internal subset first. Therefore, the internal DTD takes precedence*” (page 77, third paragraph). Therefore, Tittel shows that a criterion is used for selecting the validation table.

24. **Regarding dependent claim 6**, Tittel discloses the first delegate making a decision based on an element that is neither the first element nor a subtree of the first element. Tittel discloses on page 69, in the section titled *Mixed Content Mixes It Up*, a first delegate with the following code: “ `<!ELEMENT Name <(#PCDATA | Child1 | Child2)*>` ” wherein the “*PCDATA*” is an element that is neither the first element nor a subtree of the first element, but is used by the delegate.

25. **Regarding dependent claim 8**, Tittel discloses the first and second delegates as interpretable code in the code listing shown at the top of page 66.

26. **Regarding dependent claim 9**, Tittel discloses the use of validation tables as described above in the rejection of claim 1.

27. **Regarding independent claim 10**, Tittel discloses creating the validation delegates, wherein the delegates validate a particular type of element of a message. Tittel's chapter 5, *Understanding and Using DTDs* describes the steps related to creating a DTD, wherein the DTD validates elements of a message, as described above. See in particular the section on page 65 titled *Document Type Declarations* where the basic structure of the DTD is described.
28. **Regarding dependent claim 11**, the claim is directed toward a method for the computer-readable medium of claim 2, and is rejected using the same rationale.
29. **Regarding dependent claim 12**, Tittel discloses applying the first validation delegate to the element when the element is encountered, and only applying the second delegate to the element after the first delegate has been applied to the first delegate and any subtrees of the first element. This functionality is inherent in any programming language. A first section of code (i.e. a delegate) will be completely executed before a second section of code (i.e. a second delegate) is initiated. Where the first section of code is directed toward an element, and the element has dependent elements (child elements), that element and the child elements will be processed before the second section of code is initiated.
30. **Regarding dependent claim 14**, Tittel discloses the message organized in the form of a tree, as described above in relation to the rejection of claim 1.

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31. **Regarding dependent claim 15**, the claim is directed toward a method for the computer-readable medium of claim 4, and is rejected using the same rationale.
32. **Regarding dependent claim 16**, the claim is directed toward a method for the computer-readable medium of claim 8, and is rejected using the same rationale.
33. **Regarding dependent claim 17**, Tittel discloses one of the validation delegates as null. Tittel discloses in table 5-2, on pages 68 and 69, a listing of the types of content for elements supported in XML. The second content type is "EMPTY" which is described as "*an element must contains no content*", hence is null.
34. **Regarding independent claim 18**, the claim is substantially the same as claim 1, and is rejected using the same rationale.
35. **Regarding dependent claim 19**, the claim is directed toward a computer-readable medium for the method of claim 12, and is rejected using the same rationale.
36. **Regarding independent claim 20**, the claim is substantially the same as claim 4, and is rejected using the same rationale.

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37. **Regarding independent claim 21**, the claim is directed toward a system for the computer-readable medium of claim 1, and is rejected using the same rationale.
38. **Regarding dependent claim 22**, the claim is directed toward a system for the computer-readable medium of claim 2, and is rejected using the same rationale.
39. **Regarding dependent claim 23**, the claim is directed toward a system for the method of claim 12, and is rejected using the same rationale.
40. **Regarding dependent claim 25**, the claim is directed toward a system for the computer-readable medium of claim 8, and is rejected using the same rationale.

Claim Rejections - 35 USC § 103

41. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

42. Claims 7, 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tittel in view of McCanne et al., US Patent 6,667,700, filed 10/30/2002, patented 12/23/2003.

43. **Regarding claim 7**, Tittel discloses validation tables for elements as described above. Tittel fails to disclose the use of a flag in the table to control the traversal of the tree or sub tree. McCanne teaches the use of flags to control traversal of a tree. McCanne recites: *"In this embodiment, the encoded stream is equivalent to a hierarchical tree of references where the segments at the leaves of the tree are marked (via the terminal flag) to indicate where the decoding traversal should halt"* (column 13, lines 13-16). Therefore, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made to combine the message validation of Tittel with the flag enabled tree traversal control of McCanne in order to improve hierarchical segment representation.

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44. **Regarding dependent claims 13 and 24**, the claim is directed toward a method and a system for the computer-readable medium of claim 7, and is rejected using the same rationale.

Response to Arguments

45. Applicant's arguments filed 6/12/2006 have been fully considered but they are not persuasive.
46. Regarding the rejected claims applicant argues that: "the examiner has overlooked the differences between syntax and substance. A DTD is used to define correct syntax for a particular type of XML document" (page 10, third paragraph, of the response filed 6/12/2006). Applicant is directed to the rejection of the claims, as stated above. A data type definition (DTD) allows the contents of a message to be divided up into individual and discrete pieces of data, that can then be processed in more robust ways. Tittel discloses the use of DTDs, using content items as data, and using data in traditional data manipulation processes. Using a data element to validate another data element is well known (i.e. using a zip code to validate a state or city in an address data record).
47. Regarding claims 7, 13 and 24, applicant states that: "*the validation engine does not traverse the subtree. This feature is not found in the Tittel. Reference*" (page 11, second paragraph of the response filed 6/13/2006).

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Applicant is directed to the rejection of these claims as stated above. The examiner has failed to find support for the negatively recited limitation, as indicated by applicant.

48. Regarding the non-statutory rejections made under 35 USC 101, the applicant is directed to the claim rejections as restated above. The claimed invention fails to produce a tangibly useful result. The invention fails to produce a result that is tangible to one of ordinary skill, that would make or use the invention. The invention is directed toward validating a message. The claimed invention fails to describe how the result of the invention (i.e. the result of the validating) is given to the user. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. Validating the message within the confines of the computing device is the manipulation of an abstract idea, and is therefore non-statutory.

Conclusion

49. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571) 272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory J. Vaughn
Patent Examiner
September 1, 2006

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER